Rec'd PET/PTO 2 7 SEP 2004

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1 (1814) 1

(43) International Publication Date 9 October 2003 (09.10.2003)

PCT

(10) International Publication Number WO 03/082286 A1

- (51) International Patent Classification7:
- A61K 31/47
 - (74) Agent: LEE, Won-Hee; 8th F1., Sung-ji Heights II, 642-16, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR).
- (21) International Application Number: PCT/KR02/00595

3 April 2002 (03.04.2002)

(25) Filing Language:

Korean

(26) Publication Language:

(22) International Filing Date:

English

- (71) Applicant (for all designated States except US): CHEMON INC. [KR/KR]; 464-5 Joong-ri, Kusung-eup, Youngin-si, Kyunggi-do 449-916 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CHI, Dae-Yoon [KR/KR]; #215-804 Hangaram Apt., Dongbu ichon-dong, ichon1-dong, Youngsan-ku, Seoul 140-031 (KR). LEE, Byoung-Se [KR/KR]; #111-1605 Halra Apt., Bak-dal-dong, Manan-ku, Anyang-si, Kyunggi-do 430-030 (KR). CHU, Soyoung [KR/KR]; #3-606 Hanyang Apt., Yonghyun5-dong, Nam-ku, Incheon 402-025 (KR). LEE, Byung-Chul [KR/KR]; 55-18 Kuui2-dong, Kwangjin-ku, Seoul 143-202 (KR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: QUINOLINE DERIVATIVES, THEIR PREPARATION AND PHARMACEUTICAL COMPOSITIONS COMPRISING THE SAME

(57) Abstract: Novel quinoline derivatives were prepared and evaluated their pharmaceutical activities. The quinoline derivatives according to the present invention effectively bind serotonin transporter (SERT) which is called serotonin reuptake site. Serotonin is one of the neurotransmitter and the lack of its concentration in synapse cause the depression. The quinoline derivatives in this invention can interrupt reuptake of serotonin into presynaptic neuron resulting the increasement of concentration of serotonin in synapse as well as stimulating the signal through the binding with serotonin recepter. Thus, they can be used for the prevention and treatment of mental disorder, especially depression, caused by the deficiency of serotonin concentration in synapse.



O 03/082286 A1